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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte EARL O. BERGERSEN

Appeal 2009-007487
Application 10/665,441
Technology Center 3700

Before WILLIAM F. PATE III, STEVEN D.A. McCARTHY and
FRED A. SILVERBERG, *Administrative Patent Judges*.

McCARTHY, *Administrative Patent Judge*.

DECISION ON APPEAL¹

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

1 STATEMENT OF THE CASE

2 The Appellant appeals under 35 U.S.C. § 134 from the decision of the
3 Examiner finally rejecting claims 1-20 and 35-87. The Examiner rejects
4 claims 1-6, 8-12, 14, 16, 17, 19, 20, 35-39, 41, 42, 44-51, 58-66 and 68-87
5 under 35 U.S.C. § 102(b) as being anticipated by Bergersen (5,645,420,
6 issued Jul. 8, 1997); claims 7, 13, 43, 52-57 and 85-87 under 35 U.S.C.
7 § 103(a) as being unpatentable over Bergersen; claims 15, 40 and 67 under
8 § 103(a) as being unpatentable over Bergersen and Andrews (US 4,591,341,
9 issued May 27, 1986); and claims 6, 42 and 66 under § 103(a) as being
10 unpatentable over Bergersen and Watson (US 5,328,362, issued Jul. 12,
11 1994). The Examiner has identified no ground of rejection for claim 18.
12 The Examiner has withdrawn claims 21-34 from consideration. We have
13 jurisdiction under 35 U.S.C. § 6(b).

14 We sustain the rejections of claims 8-13, 63-67 and 74-84. We do not
15 sustain the rejections of claims 1-7, 14-20, 35-62, 68-73 and 85-87.

16 Claim 8 is illustrative of the claimed subject matter:

17 8. A method for correcting a dentition in a
18 mouth of a user having one or more types of teeth
19 wherein one of the types of teeth is canine teeth,
20 the method comprising the steps of:
21 providing a generally U-shaped base having
22 a first socket that receives the canine teeth;
23 contacting the canine teeth with the
24 generally U-shaped base
25 wherein the generally U-shaped base
26 contacts the canine teeth on an outer side of
27 the canine teeth and on an inner side of the
28 canine teeth
29 wherein the inner side of the canine
30 teeth is opposite in position to the outer side

wherein the socket has an occlusal surface;
forming wedges within the first socket wherein each of the wedges extend outward with respect to the occlusal surface of the first socket to form an apex shaped to extend toward a canine tooth that is one of the canine teeth and to contact the canine tooth wherein the wedges contact an interproximal area of the canine tooth wherein the interproximal area is located between the canine tooth and a second tooth and further wherein the wedge does not contact any area of the canine tooth other than the interproximal area; and moving the canine tooth with the wedge the base is worn by the user.

OPINION

Rejections Sustained

The Rejections of Claims 8-13, 63-66 and 74-84 under § 102(b) as being anticipated by Bergersen; the Rejections of Claims 52-57 under § 103(a) as being unpatentable over Bergersen; the Rejection of Claim 67 under § 103(a) as being unpatentable over Bergersen and Andrews; and the Rejections of Claim 66 under § 103(a) as being unpatentable over Bergersen and Watson

ISSUES

30 The Appellant separately argues only the independent claims. The
31 identification of issues in this appeal is made more difficult by the
32 Appellant's choice to present the arguments addressed to specific claims by
33 quoting claim language without further explanation. (*See* App. Br. 19-22).
34 The quotation of claim language, and, in particular, the quotation of the

1 entire body of a claim, without further explanation provides no guidance as
2 to how the Examiner might have erred in rejecting the claim. *Cf.* 37 C.F.R.
3 § 41.37(c)(1)(vii) (“A statement which merely points out what a claim
4 recites will not be considered an argument for separate patentability of the
5 claim.”).

6 Only issues and findings of fact contested by the Appellant have been
7 considered. *See Ex Parte Frye*, 94 USPQ2d 1072, 1075-76 (BPAI 2010). In
8 view of the Examiner’s findings and conclusions, and the Appellant’s
9 arguments, this appeal raises the following issues:

10 Does Bergersen disclose a dental appliance wherein a
11 first portion of the dental appliance constructed from a first
12 material contacts a different set of teeth than does a second
13 portion of the dental appliance constructed from a second
14 material harder than the first material? (*See* App. Br. 18; Reply
15 Br. 4-5).

16 Does Bergersen disclose forming a slot in a base and
17 continuously increasing the width of the slot from a first portion
18 sized to receive an incisor type of tooth to a fourth portion sized
19 to receive a molar type of tooth? (*See* App. Br. 18).

20 Does Bergersen disclose wedges as recited in claims 8,
21 63 and 74? (App. Br. 19)

22

23 FINDINGS OF FACT

24 The record supports the following findings of fact (“FF”) by a
25 preponderance of the evidence.

1 1. Bergersen describes a “preformed appliance for straightening
2 and guiding teeth and providing jaw shaping functions for the permanent
3 dentition. (Bergersen, col. 3, l. 66 – col. 4, l. 1).

4 2. Bergersen’s appliance includes a U-shaped base. The base
5 includes an upper or superior tooth receiving trough 22 and a lower or
6 inferior tooth receiving trough 24. (Bergersen, col. 4, ll. 15-19).

7 3. Both the superior and inferior tooth receiving troughs 22, 24 are
8 provided with a plurality of tooth receiving depressions or sockets 22a-22g.
9 These sockets may be divided into first, second, third and fourth sections of
10 different shape. The sockets of the first through fourth sections are sized to
11 receive incisors, cuspids, bi-cuspids and molars, respectively. (Bergersen,
12 col. 4, ll. 25-31).

13 4. We adopt the Examiner’s finding that each of the troughs 22,
14 24 are slots. (*See Ans. 11*). We also adopt the Examiner’s finding that the
15 width of the trough or slot 22 “increases from the front (Figure 3, a cross
16 section of Figure 2 on line III-III) to the rear (Figure 5).” (Ans. 4).

17 5. We also adopt the Examiner’s finding that Bergersen discloses
18 “that a harder or softer liner material may be added to the base at ‘selected
19 tooth depressions’ (column 7, lines 61-62) in order to help reposition a
20 particular tooth.” (Ans. 5).

21 6. Bergersen discloses reshaping selected tooth depressions
22 exactly to the outer contour of the respective teeth to firmly hold the selected
23 teeth in precise position. Bergersen discloses accomplishing this reshaping
24 by introducing into the selected depressions a soft moldable material which
25 has the property of hardening at body temperature after a short period of
26 time. The body or base with the moldable material introduced into the

1 selected depressions is placed into the patient's mouth. The moldable
2 material hardens in the patient's mouth. Once the moldable material
3 hardens, the material is trimmed at the margins of the tooth depressions.
4 (Bergersen, col. 7, ll. 43-58). Bergersen describes the liner material formed
5 from the moldable material as being "within selected tooth depressions."
6 (Bergersen, col. 7, ll. 58-65).

7 7. Bergersen discloses that the base has wedge-shaped projections
8 100 provided between the canines and lateral incisors. (Bergersen, col. 9, ll.
9 44-47). Bergersen reports that the wedge shaped projection 100 moves the
10 canine tooth. That is, the projection 100 causes the canines to drift distally
11 along a distal surface of the wedge. (Bergersen, col. 9, ll. 63-66).

12 ANALYSIS

13 14 The Appellant contends that Bergersen fails to disclose a dental
15 appliance wherein a first portion of the dental appliance constructed from a
16 first material contacts a different set of teeth than does a second portion of
17 the dental appliance constructed from a second material harder than the first
18 material? (See App. Br. 18; Reply Br. 4-5). Bergersen discloses introducing
19 a "soft moldable material" to selected tooth depressions of a dental appliance
20 formed from a different material. (FF 5 and 6). The Appellant does not
21 appear to contest that one of the two materials will be harder than the other.
22 (See App. Br. 18; Reply Br. 4-5).

23 Since the soft moldable material is introduced only into selected tooth
24 depressions, the soft moldable material will not contact all of the teeth.
25 Those teeth not contacted by the soft moldable material will be contacted by
26 the material from which the appliance was originally made. Since the

1 material from which the appliance was originally made contacts some teeth
2 which are not contacted by the soft moldable material, the material from
3 which the appliance was originally made and the soft moldable material
4 necessarily contact different sets of teeth. This is true even if the sets of
5 teeth contacted by the two materials overlap. Neither claim 52 nor claim 79
6 require a dental appliance in which the first and second materials contact
7 different teeth.

8 The Appellant contends that Bergersen fails to disclose forming a slot
9 in a base and continuously increasing the width of the slot from a first
10 portion sized to receive an incisor type of tooth to a fourth portion sized to
11 receive a molar type of tooth. The ordinary usage of the term slot is
12 sufficiently broad to encompass “a hollow or depression,” “a long and
13 narrow opening or groove” or “a narrow passage, enclosure or space.”
14 (WEBSTER’S THIRD NEW INT’L DICTIONARY (1971)(“slot,” entry 2, defs. 1,
15 2a and 2b). Any of these dictionary definitions fits Bergersen’s troughs 22,
16 24.

17 The Appellants’ Specification neither expressly defines the term
18 “slot” nor clearly disclaims an interpretation of that term sufficiently broad
19 to encompass Bergersen’s troughs 22, 24. *See In re ICON Health & Fitness,*
20 *Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007); *In re Morris*, 127 F.3d 1048,
21 1054 (Fed. Cir. 1997)(in the absence of an express definition of a claim term
22 in the specification or a clear disclaimer of scope, the claim term is
23 interpreted as broadly as the ordinary usage of the term by one of ordinary
24 skill in the art reasonably permits). Neither does the Appellant provide
25 evidence or reasoning to suggest that the term “slot” has a specialized
26 meaning in the pertinent art. Bergersen’s troughs 22, 24 are slots. (FF 4).

1 The Examiner finds that the width of the trough or slot 22 “increases
2 from the front . . . to the rear (Figure 5).” (FF 4, citing Ans. 4). This finding
3 is supported by the disclosure of Bergersen (FF4, comparing Bergersen, fig.
4 3 with *id.*, fig. 5) and is not persuasively contested by the Appellant.
5 Bergersen’s slot or trough 22 continuously increases in width from a first
6 portion sized to receive an incisor type of tooth to a fourth portion sized to
7 receive a molar type of tooth. (FF 4).

8 The Appellant contends that Bergersen fails to disclose wedges as
9 recited in claim 8. The Examiner finds that such wedges are disclosed by
10 Bergersen in the paragraph beginning at column 9, line 63 and ending at
11 column 10, line 3. (Ans. 11). The paragraph beginning at column 9, line 63
12 and ending at column 10, line 3 describes wedge shaped projections 100.
13 (FF 7). The Appellant does not appear to contest the Examiner's finding
14 that the wedge shaped projections 100 are wedges as recited in claims 8, 63
15 and 74.

16

17 CONCLUSIONS

18 Bergersen discloses a dental appliance wherein a first portion of the
19 dental appliance constructed from a first material contacts a different set of
20 teeth than does a second portion of the dental appliance constructed from a
21 second material harder than the first material.

22 Bergersen discloses forming a slot in a base and continuously
23 increasing the width of the slot from a first portion sized to receive an
24 incisor type of tooth to a fourth portion sized to receive a molar type of
25 tooth.

1 Bergersen discloses wedges as recited in claims 8, 63 and 74.
2 We sustain the rejections of claims 8-13, 63-66 and 74-84 under
3 § 102(b) as being anticipated by Bergersen. The Appellant does not contest
4 the Examiner's reasoning in support of the conclusions that the subject
5 matter of claims 52-57 would have been obvious from the teachings of
6 Bergersen; that the subject matter of claim 67 would have been obvious
7 from the teachings of Bergersen and Andrews; or that the subject matter of
8 claim 66 would have been obvious from the teachings of Bergersen and
9 Watson. We also sustain the rejections of claims 52-57 under § 103(a) as
10 being unpatentable over Bergersen; the rejection of claim 67 under
11 § 103(a) as being unpatentable over Bergersen and Andrews; and the
12 rejections of claim 66 under § 103(a) as being unpatentable over
13 Bergersen and Watson.

14

15 *Rejections Not Sustained*

16 *The Rejections of Claims 1-6, 14, 16, 17, 19, 20, 35-39, 41, 58-62 and 68-73
17 under § 102(b) as being anticipated by Bergersen; the Rejections of Claims
18 7 and 43 under § 103(a) as being unpatentable over Bergersen; the
19 Rejection of Claim 40 under § 103(a) as being unpatentable over Bergersen
20 and Andrews; and the Rejections of Claims 6 and 42 under § 103(a) as
21 being unpatentable over Bergersen and Watson*

22 Claim 1 recites a dental appliance. The dental appliance includes "a
23 wire embedded within the base . . . wherein the wire extends vertically from
24 the base adjacent to the first side of the tooth and does not extend from the
25 base adjacent to the second side of the tooth." The Examiner finds that:

26 In regard to the "wire embedded in the base"
27 limitation of claim 1, Bergersen '420 discloses in
28 Figures 13 and 14 a wire member 104 (note
29 column 10, lines 4-10) which is embedded within

1 the base and extends from the base vertically (in a
2 "serpentine shape") into the outer wall (i.e. second
3 wall 28) on one side of a tooth and not on the
4 opposite side of the same tooth (i.e. in the first
5 inner wall 26). For purposes of the present
6 rejection the "base" is considered to be that portion
7 between the two roughly horizontal lines in the
8 reproduced Figure 5 below and the first and second
9 walls are considered to extend upward from the
10 base.

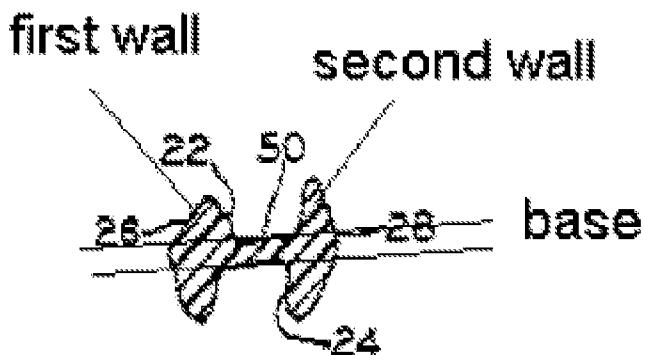


FIG. 5

11
12 (Ans. 4-5). Figure 5 is a sectional view of an orthodontic appliance
13 including flanges 26, 28 connected by an isthmus 50 to
14 define tooth receiving troughs 22, 24.

15 The Appellant correctly points out that the Examiner's interpretation
16 of the term "base" as used in claim 1 is unreasonable. (See Reply Br. 2-3).
17 For example, claim 1 recites "a slot in the base wherein the slot is defined
18 between the first wall and the second wall." The slot defined between the
19 first and second walls can be in the base only if the first and second walls are
20 part of the base.

21 Bergersen describes the wire member 104 as being "molded into the
22 interior of the appliance." (Bergersen, col. 10, ll. 4-7). When the term
23 "base" is properly interpreted as including the buccal flange 94 (see

1 Bergersen, figs. 13 and 14), the wire member 104 does not extend vertically
2 *from* (that is, out of) the base. The Examiner identifies no other structure
3 disclosed by Bergersen which might correspond to the wire recited in claim
4 1.

5 Claim 14 recites a method for correcting a dentition. The method
6 includes the step of “applying pressure to one side of the tooth with a wire
7 embedded within the base wherein the wire extends vertically from the base
8 and contacts the first tooth only on one side of the first tooth.” Claim 58
9 recites a dental appliance. The dental appliance includes “a wire embedded
10 within the base wherein the wire extends vertically from the exterior surface
11 of the generally U-shaped base toward a tooth when the base is worn by a
12 user.” Claim 68 recites a method for treating a malocclusion in a mouth of a
13 user. The method includes the step of “contacting the canine type tooth with
14 a wire embedded in the base wherein the wire extends from the base and
15 contacts the canine type tooth only on one side of the canine type tooth.”

16 Interpreting the term “base” as used in claims 14, 58 and 68
17 consistently with the usage of the term in claim 1, *see Rexnord Corp. v.*
18 *Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001) (“[A] claim term
19 should be construed consistently with its appearance . . . in other claims of
20 the same patent.”), the wire member 104 does not extend vertically *from* the
21 base. The Examiner identifies no other structure disclosed by Bergersen
22 which might correspond to the wire recited in claim 14, claim 58 or claim
23 68.

24 Claim 35 recites a dental appliance. The dental appliance includes “a
25 wire embedded within the base wherein the wire extends vertically from a
26 top surface of the second wall toward the teeth when the base is worn by the

1 user wherein the wire is shaped to contact a labial side of the first tooth.”
2 The wire member *104* does not extend vertically *from* (that is, out of) either
3 the buccal flange *94* or the opposite, lingual flange. The Examiner identifies
4 no other structure disclosed by Bergersen which might correspond to the
5 wire recited in claim 35.

6 Bergersen does not disclose each and every limitation of independent
7 claims 1, 14, 35, 58 and 68. Since claims 2-6 depend from claim 1; claims
8 16, 17, 19 and 20 depend from claim 14; claims 36-39, 41 and 42 depend
9 from claim 35; claims 59-62 depend from claim 58; and claims 69-73
10 depend from claim 68, we do not sustain the rejections of claims 1-6, 14, 16,
11 17, 19, 20, 35-39, 41, 42, 58-62 and 68-73 under § 102(b) as being
12 anticipated by Bergersen.

13 Claim 7 depends from claim 1. In rejecting claim 7 under § 103(a),
14 the Examiner concludes that it would have been obvious “to have embedded
15 the wire in the internal wall of the appliance in order to push the inner side
16 of the patient’s teeth.” (Ans. 8). Bergersen fails to disclose any wire
17 extending vertically from the base. The Examiner’s reasoning does not
18 persuasively explain why one of ordinary skill in the art might have had
19 reason to provide such a wire in the absence of evidence that the use of such
20 a wire to apply pressure to a patient’s teeth was known. We do not sustain
21 the rejection of claim 7 under § 103(a) as being unpatentable over
22 Bergersen.

23 Claim 43 depends from claim 35. The Examiner concludes that it
24 would have been obvious to provide an appliance with a vertical slit on the
25 exterior surface as recited in claim 43. (*See* Ans. 8). The Examiner’s
26 reasoning does not remedy the deficiencies in the disclosure of Bergersen

1 identified in connection with the rejections of claim 35. We do not sustain
2 the rejections of claim 43 under § 103(a) as being unpatentable over
3 Bergersen.

4 Claim 15 depends from claim 14. Claim 40 also depends from claim
5 35. Andrews discloses an orthodontic positioner *10* with molded
6 depressions *12a-12c*. Figure 3 of Andrews depicts strips of suction devices
7 *14, 16* located to confront inner and outer surfaces of a row of teeth when
8 the positioner is worn. (*See* Andrews, col. 2, ll. 59-67). The Examiner fails
9 to explain persuasively how the teachings of Andrews remedy the
10 deficiencies in the disclosure of Bergersen identified in connection with the
11 rejections of claim 14 and 35. (*See* Ans. 9). We do not sustain the rejection
12 of claims 15 and 40 under § 103(a) as being unpatentable over Bergersen
13 and Andrews.

14 Claim 6 depends from claim 1. Claim 42 depends from claim 35.
15 Watson discloses an interocclusal dental appliance including a relatively
16 hard occlusal layer which is formed from a first material and joined to a
17 jacketing section formed from a second material. (Watson, col. 3, ll. 45-48
18 and col. 3, l. 60 – col. 4, l. 2). The Examiner fails to explain persuasively
19 how the teachings of Watson remedy the deficiencies in the disclosure of
20 Bergersen identified in connection with the rejections of claims 1 and 35.
21 (*See* Ans. 10). We do not sustain the rejections of claims 6 and 42 under
22 § 103(a) as being unpatentable over Bergersen and Watson.

1 *The Rejections of Claims 44-51 and 85-87 under § 102(b) as being*
2 *anticipated by Bergersen; and the Rejections of Claims 85-87 under*
3 *§ 103(a) as being unpatentable over Bergersen*

4 Claims 44 and 85 recite dental appliances. The dental appliance of
5 claim 44 includes “a wire embedded within the base wherein the wire is
6 shaped to contact only a labial side of one of the teeth.” The dental
7 appliance of claim 85 includes “a wire embedded in the base wherein the
8 wire extends from the outer surface of one of the sockets wherein the wire
9 contacts the first tooth and further wherein the wire extends from only one
10 side of the socket.” The Examiner finds that the limitations requiring the
11 wires to “contact” one of the teeth are met “by the wire 104 of Bergersen
12 '420, which runs immediately adjacent the tooth sockets (Figure 13) and
13 contacts at least a first tooth through an apparent thin layer of plastic.” (Ans.
14 10-11).

15 The ordinary usage of the term “contact” is limited to “union or
16 junction of body surfaces: a touching or meeting.” (WEBSTER'S THIRD NEW
17 INT'L DICTIONARY (1971)(“contact,” entry 1, def. 1a). The Examiner points
18 to no broader usage in the Specification. Bergersen describes the wire
19 member 104 as being “molded into the interior of the appliance.”
20 (Bergersen, col. 10, ll. 4-7). The Examiner provides no sound basis for
21 belief that Bergersen's wire member 104 contacts any tooth in the sense of
22 touching or meeting the tooth. Neither does the Examiner identify another
23 structure disclosed by Bergersen which might correspond to the wire recited
24 in claim 44 or claim 85.

25 Bergersen does not disclose each and every limitation of claims 44
26 and 85. Since claims 45-51 depend from claim 44 and claims 86 and 87
27 depend from claim 85, we do not sustain the rejections of claims 44-51 and

1 85-87 under § 102(b) as being anticipated by Bergersen. Although the
2 Examiner has entered a hybrid 102(b)/103(a) rejection against claims 85-87
3 over Bergersen, the Examiner fails to explain how the subject matter of
4 claims 85-87 might have been obvious if the claims are not anticipated by
5 Bergersen. We do not sustain the rejections of claims 85-87 under § 103(a)
6 as being unpatentable over Bergersen.

7

8 DECISION

9 We AFFIRM the Examiner's decision rejecting claims 8-13, 52-57,
10 63-67 and 74-84.

11 We REVERSE the Examiner's decision rejecting claims 1-7, 14-20,
12 35-51, 58-62, 68-73 and 85-87.

13 No time period for taking any subsequent action in connection with
14 this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R.
15 § 1.136(a)(1).

16

17 AFFIRMED-IN-PART

18

19

20 Klh

21

22 PATENTS+TMS, P.C.
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